DCCUMENT RESUME

ED 036 324 PS 002 741

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TITLE CHILDREN AND TEACHERS IN TWO TYPES OF HEAD START CLASSES.
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SPONS AGENCY OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. COOPERATIVE RESEARCH PROGRAM.
PUB DATE 69
NOTE 14P.

EDRS PRICE EDRS PRICE MF-$0.25 HC-$0.80
DESCRIPTORS *COMPARATIVE ANALYSIS, *EXPERIMENTAL PROGRAMS, LEARNING THEORIES, *PRESCHOOL PROGRAMS, *PROGRAM EFFECTIVENESS, RESEARCH PROBLEMS, SOCIALIZATION, TEACHER BEHAVIOR, TEACHING STYLES

ABSTRACT

TO COMPARE THE EFFECTIVENESS OF THE TRADITIONAL AND THE EXPERIMENTAL APPROACHES TO HEAD START CLASSROOMS, 68 CHILDREN AND SIX TEACHERS IN SAN FRANCISCO PARTICIPATED IN AN EDUCATIONAL EXPERIMENT. THE TRADITIONAL APPROACH EMPHASIZES THE CHILDREN'S INTERNAL MOTIVATION RESULTING FROM SPONTANEOUS FREE PLAY AND WARM, ACCEPTING TEACHERS, WHILE THE EXPERIMENTAL APPROACH EMPHASIZES SOCIAL LEARNING THEORY IN THE FORM OF TEACHER-DIRECTED ACTIVITIES AND FREQUENT PRAISE OR REINFORCEMENT FOR APPROPRIATE BEHAVIORS. EACH OF THE SIX TEACHERS WAS GIVEN A CHOICE OF APPROACH. THREE CHOSE TRADITIONAL; THREE EXPERIMENTAL. THE CLASSROOMS WERE OBSERVED AND EVALUATED FOR STUDENT BEHAVIOR (CHILD BEHAVIOR SURVEY INSTRUMENT) AND TEACHER BEHAVIOR. THE THREE TEACHERS IN THE EXPERIMENTAL APPROACH DID NOT CARRY OUT THEIR ROLES AS PRAISE-DISPENSERS, THUS MAKING THE MORE DESIRABLE BEHAVIOR OF THE CHILDREN IN THE TRADITIONAL APPROACH CLASSES MEANINGLESS FOR ANY COMPARISON OF THE TWO APPROACHES. THE MAJOR IMPLICATION OF THIS RESEARCH IS THAT ACTUAL APPLICATION OF SOCIAL LEARNING THEORY REQUIRES MORE THAN AGREEMENT WITH ITS PRINCIPLES. OBSERVED INTRA-APPROACH DIFFERENCES SUGGEST THAT A STUDY OF INDIVIDUAL TEACHER STYLE IS NEEDED AS WELL AS A RECOGNITION THAT DIFFERENT CHILDREN THRIVE IN DIFFERENT KINDS OF CLASSROOMS. (MH)

ED036324

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Children and Teachers in Two Types of Head Start Classes

(in press, Young Children)

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PS002741

The research and development reported herein were performed pursuant to a contract with the U. S. Department of Health, Education and Welfare, Office of Education, under the provisions of the Cooperative Research Program, Stanford Center for Research and Development in Teaching, Stanford University, Stanford, California.

Children and Teachers in Two Types of Head Start Classes

In the summer of 1967, sixty-eight children and their teachers participated in a unique educational experiment near San Francisco which was designed to answer some of the basic questions teachers ask about how to plan Head Start classes. How much free play do Head Start Children need? Does the young child's motivation for learning "come from within"? Do structured learning activities stifle young children? Should teachers use praise only to keep children working at school-related tasks?

Questions like these are being asked with increasing frequency as innovation and expansion in preschool education has occurred. These years of rapid expansion have been marked by strong conflict and dissension among educators over which preschool methods and techniques should be employed in Head Start and similar compensatory preschool programs. There are two major approaches to preschool education which are in contention: the "traditional" and the "experimental". The "traditional" approach emphasizes the child's needs for warm accepting teachers and spontaneous free play, while the "experimental" preschools emphasize teacher-planned activities, and the use of praise and approval to encourage school-related behavior in children.

What is important for educators who work with young children is that the controversy over preschool programs reflects not only differences in objectives and philosophies, but differences in theoretical ppositions as well. Philosophies and objectives can be questioned and debated, but theories and their hypotheses can be tested. The experiment reported in this paper was designed to test hypothesized effects of differences between programs on the children's involvement in learning activities, their cognitive behavior, achievement motivation and the satisfaction they experience in the classroom.

For a brief discussion of the theoretical implications of the two contending preschool approaches, we can begin with the recent theoretical work of J. McV. Hunt.

From an examination of contemporary information-processing theory, as well as the work of Piaget, Hunt derived what he called the "problem of the match" (Hunt 1964). The basic notion of the "match" is that the child develops intellectually by constant interaction with the information, or inputs, coming to him from his environment. In the course of this interaction, the child "tests" the information coming to him from his environment against information he has already coded and stored from previous experiences. When the new information tests, or checks out, as totally congruous or familiar with what he already has coded and stored, the child experiences boredom. On the other hand, when there is a great discrepancy or incongruity between the new information coming to him and what he already knows, i.e., it is too unfamiliar or strange, then it is experienced as threatening, and he is likely to withdraw. However, when the child experiences new information which he finds neither too familiar nor too strange, a good "match" is achieved. The information will arouse his interest, stimulate his involvement, his thinking and activity. It is this search for the level of optimal unfamiliarity that Hunt calls the problem of "matching" the child's past knowledge with his new environment.

Hunt extended this concept to suggest that probably only the child himself can choose that source of information which can provide him with an optimal level of incongruity (Hunt, 1964). This theoretical framework gives support to the "traditionalist" emphasis on self-selected activity and spontaneous free play.

The "experimentalists", however, do not rely on the children's spontaneous interests and play to foster their learning. They plan and direct the children's activities because this planning increases the chances that the children will engage in those kinds of behaviors (e.g. problem solving, task persistence) that teachers want to reward and strengthen. Theoretical support for the "experimental" approach to preschool education can be found in social learning theory, sometimes called "operant conditioning" (cf. Bandura, 1963, Bijou, 1961). According to this position, "the reinforcement an individual receives for a performance will be critical in determining whether or not that performance will be repeated" (Gray, et al., 1966). Thus, social learning theory stresses the role of the teacher as a dispenser of rewards: praise, approval or material rewards. These rewards are to be given to the child when he engages in the behavior the teacher wishes to foster.

The "traditionalists" tend to de-emphasize the role of external rewards or reinforcement in modifying children's behavior. The literature associated with the "traditional" preschool approach reflects the assumption that the teacher's open acceptance of the child "for what he is rather than what he does" serves to increase his self esteem, and that this in turn frees him to explore and learn from his environment. Furthermore, Hunt's concept of the "match" strongly suggests that when the young child pursues his own interests, in a sufficiently rich environment, he not only acquires new information, but his enjoyment and desire for learning are both strengthened and increased. In this case, the child does not need to be rewarded or reinforced from the outside; his own information-processing and explorations are intrinsically rewarding and satisfying.

Although there are many ways in which preschool programs differ, the specific objective of the research reported in this paper was to study just two ways in which the "traditional" and "experimental" preschool programs vary: 1) the extent to which the children select their own activities, and 2) the way in which the teachers express approval and reward children's behavior.

Design of the Experiment

In order to test the hypotheses derived from contrasting theories discussed above, two types of Head Start classes, one exemplifying the "traditional" and one the "experimental" approach were designed. Each class type was characterized by specific teacher-roles and daily programs, although all other aspects of the classroom setting were common to both class-types. Similarly the teachers in all of the classes involved in the experiment were committed to the general objectives of all Head Start programs.

Teachers interviewed for summer Head Start teaching positions were informed of the plans for the experiment, and were invited to participate in it. Each of the six teachers who expressed an interest in participation selected which of the two class-types she wished to teach. All teachers were comparable in experience and training, and were fully certified under state law.

The teacher-role characteristics specified to exemplify each type of class were as follows:

Experimental	Traditional
The teacher:	The teacher:
helps the children conform to the daily activity schedule	encourages the children to pursue their own intersts
sets up task and performance standards for the special activity	encourages individual experimentation in tasks and projects

requires children to complete their activity or task whenever appropriate	encourages any constructive activity for children not interested in special projects; task completion not emphasized
applies pressure for further effort whenever appropriate	leaves degree of child's involvement in activities up to him
takes direct initiative in guiding and suggesting activities	encourages children to follow own interests in selecting activities
emphasizes task-related behavior by praising success, achievement, effort, persistence whenever appropriate	emphasizes appreciation of the child as a person, encourages enjoyment of processes rather than products
helps each child to evaluate and analyze his task performance	evaluates child's work only when evaluation is sought by the child

Differences between the two class-types in their daily programs concerned the teachers' management of the different activity periods as indicated below:

Experimental	Traditional
Period I:	Period I:
The morning began with all children assembled. At this time the teacher divided the class into two groups of 7 or 8. These two groups alternated the half-hours being indoors and outdoors. When the group was indoors, each member was assigned to an activity area in such a way as to ensure each child's exposure to each activity area. The teacher helped each child to become involved in a suitable activity when such help was needed.	The children were greeted individually as they arrived in the classroom. The children moved freely indoors and outdoors according to their interests. The children were free to engage in any constructive activity. The teacher offered guidance to those children who clearly needed help in getting involved in an activity
Period II:	Period II:
After the snack period, the children were called to assembly; during this time, the teacher called inattentive children back to the assembly.	After the snack period, the teacher set up the special project and invited the children to participate in it in an informal manner. No child was required to become involved. Children were permitted to engage in any suitable alternate activities.

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Experimental	Traditional
Period III:	Period III:
Same as in Period I.	Same as in Period I.
Period IV:	Period IV:
Lunch lasted until about 12:00 noon. The children then were called to assembly. Story time, and/or music activities were offered. All children were required to participate in this activity.	Lunch lasted until about 12:00 noon. After lunch, stories and songs were presented in an informal manner. Suitable alternative activities were permitted for those children who did not wish to participate in the story or music activities.

Three classes of each type, giving a total of six experimental Head Start classes, met daily for four hours for the six weeks of the summer Head Start session. The six classes were distributed in two similar schools in a San Francisco Bay Area neighborhood identified by the county's Human Resources Commission as a poverty target area. The children were assigned randomly to the six classes. The average age of the children was five years two months.

In order to test the hypothesized effects of these two types of classes upon the children, measures of child behavior were taken by intensive observation of the children in the classroom, using the Child Behavior Survey Instrument developed for this purpose. In order to ensure the application of the specified teacher-role behaviors and daily programs for each class-type, the teachers were observed in their classrooms at specified times throughout the Head Start session. The experimentor trained the teachers on their respective class-type specifications.

Two observers, who were unaware of the objectives of the research, were given extensive training in the use of the Child Behavior Survey

Instrument. The Child Behavior Survey Instrument is an observation instrument which categorizes the children's classroom behavior along the dimensions needed for the experiment. Observations were made of the children's orientation to the classroom activities, selected cognitive behaviors, and their apparent satisfaction in the classroom setting. Each child was observed intensively during the initial and final week of the Head Start session.

Results of the Experiment

As indicated above, this experiment specified two types of daily programs and two sets of teacher-role characteristics, yielding class-types reflecting the "traditional" and "experimental" approaches to preschool education and the theories behind them.

Since the central differences between these two types of classes are in the teachers' behavior, it was necessary to determine whether the teachers really behaved according to the specifications of the experimental design. For this we turn to the observations made of the teachers in their classrooms.

It was expected that the three teachers in each of the two class-types would differ significantly from each other in fourteen categories of teacher behavior derived from the list of teacher-role characteristics listed on page 6.

When the data were analyzed, it was found that in nine of the fourteen categories of teacher behavior in which differences were expected, none of the six teachers obtained a score higher than 10. These low-scoring categories of teacher behavior had to be omitted from further

analyses, but their implications for research and practice in preschool programs will be discussed later in this report. For the present, the teacher behavior observations can be summarized by stating that the observations indicated that the class-type "experimental" failed to be fully applied by the three teachers who had elected to teach this kind of preschool program. The nature of these three classes, which were intended to have exemplified the "experimental" approach to preschool methods, will be discussed in a later section of this paper.

A major question asked of the data was, "What effects did the different types of classes have on the behavior of the children in them?" Each class-type, "traditional" and "experimental" and their respective supporting theories, suggests that its own methods are more likely to have positive effects on the children's behavior than their adversary's. The results of the child observation data will be discussed separately for each class type.

Effects of the "traditional" class-type

The observations made of the children's classroom behavior were designed to answer the following questions:

a) do children in a "traditional" type of class increase their involvement in the activities provided in the classroom?

b) do children in the "traditional" class-type increase in the frequency of such cognitive behaviors as seeking information, curiosity, exploration, cognitively planning their own play and work?

c) do children in a "traditional" class-type appear to gain in the pleasure and satisfaction they derive in the classroom?

Statistical analyses of the data indicated that although children in the "traditional" classes increased in task-involvement and absorption,

the increase was not significant. The cognitive behaviors observed in the classroom increased, but also not significantly. However, in these classrooms, the children gained significantly ($p < .07$, two tails) in the satisfaction they experienced in the classroom.

Effects of the classes which were supposed to have been "experimentalist"

The initial objective of this experiment was to compare the effects of the "experimental" and "traditional" preschool methods on children's behavior. Such a comparison is precluded by the fact that the teacher observations clearly showed that the "experimental" class-type did not occur as they had been designed. Detailed inspection of the teacher observational data from these three classes revealed that although the teachers maintained the specified initiative in selecting the children's activities, none of the three teachers expressed the praise, approval, or other reinforcements for appropriate child behaviors which are characteristic of the "experimental" approach. The high frequency with which these teachers gave directions and instructions, plus the low frequency with which they expressed praise, approval, encouragement and other reinforcement combined instead to provide the children in their classes with largely restrictive and non-supportive classroom atmospheres. Of the child observation data obtained in these classes we can ask:

> how does a restrictive class affect the child's involvement in the activities provided? How is his cognitive behavior affected? What effect does this kind of class have on his satisfaction in the classroom setting?

Statistical analyses of the data indicate that the children in these classes decreased in task-involvement. In addition, very significant decrease ($p < .007$, two tails) occurred in the behavior category called "attending the teacher". Similarly, the frequency of such non-task

involved behaviors as "aimless wandering around" and "disruptiveness" increased (p .12, two tails) in these classes. In the categories of behavior called "cognitive behavior" there was a small non-significant increase. No change was observed in the children's apparent satisfaction in the classroom setting.

Discussion

The results of the child observations do not entirely support the "traditionalist" position on preschool education. It is difficult to know whether the children would have made significant gains in task involvement if the Head Start session had lasted longer than six weeks. Hunt's assertion concerning the effect of the child's choice of his own activities on his involvement and absorption in learning activities is not strongly confirmed by the evidence gathered in this experiment.

The observed increase in the children's satisfaction supports the "traditional" view on the importance of warm supportive teachers and child-selection of activities. However, we cannot tell from the data which of these two classroom variables account for the significant gain in satisfaction.

Because the teachers did not perform the behaviors exemplifying the "experimental" approach to preschool education, we cannot test hypotheses derived from their theoretical positions. We only know the effects on children of an improperly applied teacher-structured class-type. The effects of a true "experimental" class-type remain to be investigated.

Implications of the Research Findings

While the intended focus of this research was upon hypothesized changes in children's behavior due to different preschool methods, the

major implications for educators are derived from what the data revealed about teachers.

The major implication concerns the translation of theory into practice. Social learning theory (cf. Becker) obliges teachers to express approval, warmth and praise when their children exhibit those behaviors they wish to strengthen. In order for the theory to "work" the teachers structure and direct the classroom activities in such a wa- as to ensure that children will emit the behaviors to be strengthened. The experiment reported here indicates clearly that when teachers attend only to the structuring and directing part of their role, and neglect the praise and supportive aspects of their role, the effect on the children is to increase those child behaviors which interfere with their learning and threaten their later school adjustment.

Another implication for the development of early childhood education is drawn from the fact that within any class-type, or particular approach to preschool methods, the teachers differed significantly from each other in many ways. Our data on teacher behavior suggest that "method" or "approach" may not be as useful to the study of preschool problems as, for example, the study of teacher style. Such aspects of behavior as tempo, vitality, sociability, etc., may increase our understanding of classroom dynamics more quickly than contention over methods.

The teacher observations also suggest that the classroom behavior of teachers is a function of strong "habits" not easily changed. Head Start classrooms are lively animated environments requiring teachers to respond, act and move spontaneously. Desirable teacher training must include ample time and opportunity for the trainee to inspect, analyze

and refine her "habits" while they are being formed; they are destined to serve her for a long time.

Returning to the methods controversy which stimulated the research in this paper, another implication can be proposed. The evidence gathered by this experiment underscores the importance of including teacher observations in comparative studies. If such data had not been included in the design of this experiment, the child observations would appear to reject the "experimental approach" and its theory. Such potential errors in the interpretation of research findings are a real threat to the improvement of early childhood education. Both Karnes (1968) and Weikart (1968) have gathered data on children in contrasting types of preschool programs. Because they have neglected to include teacher observations, the reported changes in the children lose some of their usefulness to future teacher training and program planning. Thus students and teachers should be cautioned against assuming that given teaching methods have "proven" effects unless the assertion is accompanied by empirical verification of their occurrence.

Finally, our experience in the day to day conduct of this experiment suggested that we not only need more refined studies of teacher behavior, but we need to try to identify what kinds of children profit most from what kind of teacher. Children with different patterns of needs thrive in different classroom settings. No "method" appears equally facilitating for all children. Study and research of such diverse needs and methods represent a real challenge to those who work with growing children.

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